IN THE CLAIMS:

The following compilation of claims replaces and is in lieu of all prior compilations of claims in the application.

1. (Original) An optical faceplate for photosensitive material, comprising a plurality of first members of a first optical material which are interior to a second optical material which surrounds the first members, wherein the first optical material is a non-linear optical material which has an index of refraction which is substantially the same as the index of refraction of the second optical material at a normal level of light input expected to be encountered by the faceplate but which has the property of substantially changing at least one of its index of refraction and optical transmission as a function of the amplitude of light which is received by the faceplate.

2. (Original) The faceplate of claim 1 wherein the first members are elongated.

3. (Original) The faceplate of claim 2 wherein the first members surrounded by the second optical material comprise a fiber optic bundle, wherein cores of individual fibers are the first members and cladding of individual fibers is the second optical material.

4. (Original) The faceplate of claim 3 in combination with a photocathode, wherein the photosensitive material is material of which the photocathode is comprised.

5. (Original) The faceplate of claim 3 in combination with an image intensifier tube having a photocathode, wherein the photosensitive material is material of which the photocathode is comprised.

6. (Original) A faceplate for protecting photosensitive material from high light input levels, comprising a fiber optic bundle in which individual fiber optics are comprised of cladding having a first index of refraction and a core comprised of non-linear optical material having an index of refraction which is substantially the same as the first index of refraction at a normal light level expected to be encountered by the faceplate, wherein the non-linear optical material has the property of substantially changing its index of refraction as a function of the amplitude of light which is received by the faceplate.

7. (Original) The faceplate of claim 6 wherein the non-linear optical material further has the property of substantially decreasing its optical transmission with increasing amplitudes of light received by the faceplate.

8. (Original) The faceplate of claim 7 in combination with an image intensifier tube having a photocathode, wherein the photosensitive material is material of which the photocathode is comprised.

9. (Original) A pseudo fiber optic faceplate for protecting photosensitive material from high light levels, comprising fiber optic bundle means for optically acting like a solid window at normal light levels, but for at least one of attenuating or diffusing a light spot inputted thereto at light levels above a predetermined threshold level.

10. (Original) The faceplate of claim 9 wherein the fiber optic bundle means comprises means for attenuating a light spot inputted thereto at light levels above a predetermined threshold level.

11. (Original) The faceplate of claim 9 wherein the fiber optic bundle means comprises means for diffusing a light spot inputted thereto at light levels above a predetermined threshold level.

12. (Original) The faceplate of claim 11 wherein the fiber optic bundle means comprises means for both attenuating and diffusing a light spot inputted thereto at light levels above a predetermined threshold level.

13. (Original) The faceplate of claim 11 wherein individual fibers of the fiber optic bundle means are comprised of clad glass and core glass, and wherein the means for diffusing the inputted light spot comprises means for changing the index of refraction of the core glass.

14. (Original) An image intensifier tube, comprising:

a faceplate having a photocathode disposed thereon;

an electron amplifier; and

a converter for converting amplified electrons to visible light;

wherein the faceplate is a fiber optic bundle in which individual fiber optics are comprised of cladding having a first index of refraction and a core comprised of optical material having an index of refraction which at a normal light level expected to be encountered by the faceplate is substantially the same as the first index of refraction.

15. (Original) The image intensifier tube of claim 14 wherein the cores of individual fibers are made of non-linear optical material having the property of changing at least one of its optical transmission and index of refraction as a function of the amplitude of light received by the image intensifier.

16. (Original) The image intensifier tube of claim 15 wherein the faceplate includes a first transparent cover plate at a first end of the fiber optic bundle between the fiber optic bundle and the photocathode, wherein the cover plate is made of material having substantially the same index of refraction as the cladding.

17. (Original) The image intensifier tube of claim 16 wherein the first cover plate is made of material having substantially the same coefficient of thermal expansion as the material

of which the photocathode is comprised.

18. (Original) The image intensifier of claim 16 further including a second transparent cover plate at a second end of the fiber optic bundle opposite the first end.

19. (Original) The image intensifier tube of claim 14 wherein the first index of refraction is substantially the same as the index of refraction of material of which the photocathode is comprised.

20. (Original) The image intensifier of claim 19 wherein the cathode faceplate includes a first transparent cover plate at a first end of the fiber optic bundle between the fiber and optics and the photocathode, wherein the cover plate is made of material having an index of refraction which is substantially the same as the first index of refraction.

21. (Original) The image intensifier tube of claim 15 wherein the non-linear optical material has the property of changing its index of refraction as a function of the amplitude of light received by the image intensifier.

22. (Original) The image intensifier tube of claim 21 wherein all of the fiber optics in the fiber optic bundle are comprised of cladding having a first index of refraction and a core comprised of non-linear optical material having the property of changing its index of refraction

as a function of the amplitude of light received by the image intensifier.

23. (Original) The image intensifier tube of claim 15 in combination with;

objective lens means for imaging light on the image intensifier tube, and,

an eyepiece for viewing an image produced by the image intensifier tube.

24 - 26 (Cancelled).

27. (Original) A method of making an assembly comprising a composite pseudo fiber optic faceplate and photocathode, comprising the steps of,

providing a fused fiber optic bundle comprised of individual fiber optics including cladding of material having a first index of refraction and an etchable core of material having a second index of refraction, the fiber optic bundle having first and second ends,

bonding a transparent window to the first end of the fiber optic bundle,

bonding a photocathode to the transparent window,

etching the core material of the individual fiber optics away, and

replacing the core material of the individual fiber optics with replacement optical material.

28. (Original) The method of claim 27 wherein the steps of bonding a transparent window and bonding a photocathode to the transparent window are performed before the etching step.

29. (Original) The method of claim 28 further including the step of forming a tube to the photocathode and sealing the tube, which step is performed before the etching step.

30. (Original) The method of claim 29 wherein the coefficient of thermal expansion of the replacement optical material, of the cladding material, and of the window material are matched to the coefficient of thermal expansion of the material of which the photocathode is comprised.

31. (Original) The method of claim 30 further including the step of thinning the transparent window before the photocathode is bonded thereto.

32. (Original) The method of claim 27 further including the step of bonding a cover plate to the second end of the fiber optic bundle.

33. (Original) The method of claim 27 wherein the replacement optical material is non-linear optical material having an index of refraction at normal light levels which is substantially the same as the first index of refraction.

34. (Original) The method of claim 29 wherein the replacement optical material is non-linear optical material having an index of refraction at normal light levels which is substantially the same as the first index of refraction.